

**City of Sunnyvale**  
**Ten Year Project Costs**  
**by Project Category and Type**

Project Number	Project Name	Prior Years Actual	Revised Budget 2004-05	Plan 2005-06	Plan 2006-07	Plan 2007-08	Plan 2008-09	Plan 2009-10	Plan 2010-11	Plan 2011-12	Plan 2012-13	Plan 2013-14	Plan 2014-15	Ten Year Plan Total	Project Grand Total
<b>Category: Infrastructure</b> <b>Type: Storm Drain</b>															
804702	Storm Drain Pipes, Manholes, and Laterals Replacement	0	22,304	22,000	22,440	22,889	23,347	23,814	24,290	24,776	25,271	25,777	26,292	240,896	263,200
822751	Storm Pump Station Number 1 Rehabilitation	0	635,406	0	76,500	46,818	0	0	0	0	0	0	0	123,318	758,724
822761	Storm Pump Station Number 2 Rehabilitation	0	145,460	70,000	81,600	52,020	212,242	97,419	55,204	56,308	57,434	58,583	107,558	848,368	993,828
825350	Replacement/Rehabilitation of Storm Drain Manholes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825360	Replacement/Rehabilitation of Storm Drain Pipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825370	Video Inspection and Evaluation of Storm Drain System	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825380	Storm Pump Station #1 Expansion	0	0	0	0	0	0	0	0	0	114,869	761,579	1,015,829	1,892,277	1,892,277
<b>Total</b>		0	803,170	92,000	180,540	121,727	235,589	121,233	79,494	81,084	197,574	845,939	1,149,679	3,104,859	3,908,029

Note: Projects with \$0 Grand Total have budgets in the second ten years of the Twenty Year Plan.

## Project Information Sheet

### Project: 804702 Storm Drain Pipes, Manholes, and Laterals Replacement

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	1999-00	Phase:	Ongoing	Project Manager:	Hira Raina
Planned Completion Year:	Ongoing	% Complete:	n/a	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.4A	Fund:	455 Utilities
Sub-Element:	3.4 Surface Runoff	Neighborhood:	City Wide	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

This project provides funding for miscellaneous small storm drainage projects that may arise unexpectedly. This allows for the replacement of damaged grates or deteriorated drain inlets (DIs), or grouting (sealing) of leaking pipes and manholes as identified. More significant projects would have separate funding. Chemical grouting of a leaking storm line can cost \$500 to \$3,000. New grates cost \$100 or more.

### Service Level

no service level effect

### Issues

See project 804700 and 804701 for prior expenditure history.

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	22,304	22,000	22,440	22,889	23,347	23,814	24,290	24,776	25,271	25,777	26,292	240,896	263,200
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
Fund Reserves		22,304	22,000	22,440	22,889	23,347	23,814	24,290	24,776	25,271	25,777	26,292	240,896	
<b>Total</b>	0	22,304	22,000	22,440	22,889	23,347	23,814	24,290	24,776	25,271	25,777	26,292	240,896	263,200
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Project Information Sheet

### Project: 822751 Storm Pump Station Number 1 Rehabilitation

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	2001-02	Phase:	Planning	Project Manager:	Hira Raina
Planned Completion Year:	Ongoing	% Complete:	25	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.4A	Fund:	455 Utilities
Sub-Element:	3.4 Surface Runoff	Neighborhood:	Lakewood	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

Sunnyvale operates two storm pump stations to pump accumulated storm water into tributaries to the San Francisco Bay. These are required due to areas of the City that are close to sea level and, therefore, could suffer flooding, particularly during large storms and exceptionally high tides.

Storm Pump Station No. 1 is located between the Water Pollution Control Plant (WPCP) and the SMaRT® Station. The center and south end of Sunnyvale drains to this pump station. The facility consists of a structure with two large natural-gas powered pumps, one small electric pump, three discharge pipes and a fenced yard. There are several maintenance items needed at this location. It is proposed that they be done in two separate projects. This is the first of those projects. Work required is:

1. Dredging of the ponds where water backs up during storms. The holding area is silting up and requires silt removal. The pond area to be dredged as part of this project is south of the facility and a little to the east. The large pond would be dredged as part of the second project in 10 years or later. Estimated cost is \$40,000.
2. The roof of the structure should be modified for access by crane for removing pumps requiring work. This was a problem in 2000 when pumps required emergency repair, and access was difficult. Estimated cost for this one-time alteration is \$15,000.
3. The discharge pipes are deteriorating and require relining. Estimated cost is \$65,000. The discharge pipes should remain serviceable until they are replaced as part of the Storm Pump Station #1 Expansion project when the facility is expanded.

### Service Level

no service level effect

### Issues

The pump station is in need of expansion to handle more than a 10-year storm. However, improvements will be needed to the Bay levee before such expansion is worthwhile. Currently, the pump station is at risk from the theoretical 100-year flood of the San Francisco Bay. Therefore, such improvements are not part of this project. Improvements to the building and additional dredging are in the Storm Pump Station #1 Expansion project. (See project 822750 for prior expenditure history.)

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	635,406	0	76,500	46,818	0	0	0	0	0	0	0	123,318	758,724
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
Fund Reserves		635,406	0	76,500	46,818	0	0	0	0	0	0	0	123,318	
<b>Total</b>	0	635,406	0	76,500	46,818	0	0	0	0	0	0	0	123,318	758,724
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Project Information Sheet

### Project: 822761 Storm Pump Station Number 2 Rehabilitation

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	2001-02	Phase:	Construction	Project Manager:	Hira Raina
Planned Completion Year:	2003-04	% Complete:	100	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.4A	Fund:	455 Utilities
Sub-Element:	3.4 Surface Runoff	Neighborhood:	Lakewood	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

Sunnyvale operates two storm pump stations to pump accumulated storm water to the San Francisco Bay. They are required due to areas of the City close to sea level that could suffer flooding, particularly during large storms and exceptionally high tides. Storm Pump Station #2 is located at the east end of Baylands Park. The facility consists of a structure with 6 pumps (1 small electric and 5 natural gas-powered engines), a pond surrounded by a levee, and an access road to get to the facility.

Several capital aspects of the facility must be periodically funded. Three items are included in this Rehabilitation Project: 1. Dredging of accumulated material from pond, last completed in 2004, included as a maintenance item about every 10 years. Estimated cost \$40,000 in 2014-15, 2024-25. 2. Investigation and repair of the pond levee. Surface cracking shows along the roadway atop the levee and some sloughing shows on the sides. Animal burrowing requires checking integrity of the entire levee. The budget includes an engineering study of the levee in 2005-06 (\$20,000) followed by estimated repairs of \$180,000 spread over 3 years (2005-06 - 2007-08). Repair cost will be re-estimated after engineering study. The study will suggest what maintenance to budget for yearly and when to review levee condition again (estimated in 20-year cycles). 3. Structural repairs and motor overhaul/replacement – building and pumps should be evaluated and placed on overhaul/replacement schedule. The budget includes an engineering study in 2008-09 (\$23,000), repairs to the building in 2008-09 and 2009-10 (\$265,000), and overhaul/replacement of the pumps. Proposed pump replacement is staggered, with one each year from 2010-11 through 2014-15 (at \$50,000 each). Cost will be re-estimated after engineering study. The study will identify an appropriate cycle for future building improvements/pump replacements (expected 40-year cycles for buildings and 20-year cycles for pumps).

### Service Level

The project will preserve the City's investment in its infrastructure and prevent possible breakdown of the station.

### Issues

None

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	145,460	70,000	81,600	52,020	212,242	97,419	55,204	56,308	57,434	58,583	107,558	848,368	993,828
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
Fund Reserves		145,460	70,000	81,600	52,020	212,242	97,419	55,204	56,308	57,434	58,583	107,558	848,368	
<b>Total</b>	0	145,460	70,000	81,600	52,020	212,242	97,419	55,204	56,308	57,434	58,583	107,558	848,368	993,828
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Project Information Sheet

### Project: 825350 Replacement/Rehabilitation of Storm Drain Manholes

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	2005-06	Phase:	Planning	Project Manager:	Hira Raina
Planned Completion Year:	Ongoing	% Complete:	n/a	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.4B.1	Fund:	455 Utilities
Sub-Element:	3.4 Surface Runoff	Neighborhood:	City Wide	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

The storm system infrastructure is on average 50 years old. This project replaces or rehabilitates storm water drain inlets and manholes, depending on conditions, at an average of five units/year, beginning in FY 2015/2016.

Budget was developed from an average cost of \$3,000/each to rehabilitate a storm water manhole including traffic control, confined space entry procedures, cleaning and preparation of vertical surfaces, structural modification if needed, adjustment of cones and covers, and pavement restoration. Also included would be any engineering and administrative costs. Five manholes per year would cost \$15,000. This project would be initiated in FY 2015/16 and continue as necessary. Storm catch basins and manholes are not exposed to the corrosive atmosphere of sanitary sewers, therefore the estimated cost is less, the number required is fewer, and the start date is later.

### Service Level

The project will preserve the City's investment in its infrastructure, and prevent problems that could possibly cause future floods.

### Issues

none

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Project Information Sheet

### Project: 825360 Replacement/Rehabilitation of Storm Drain Pipes

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	2005-06	Phase:	Planning	Project Manager:	Hira Raina
Planned Completion Year:	Ongoing	% Complete:	n/a	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.4B.1	Fund:	455 Utilities
Sub-Element:	3.4 Surface Runoff	Neighborhood:	City Wide	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

The storm system infrastructure is, on average, 50 years old. This project replaces or rehabilitates storm water pipes, depending on conditions, at a rate of 800 lf/yr at \$85/foot, beginning in FY 2015/2016.

### Service Level

The project will preserve the City's investment in its infrastructure and prevent problems that could possibly cause future floods.

### Issues

none

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Project Information Sheet

### Project: 825370 Video Inspection and Evaluation of Storm Drain System

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	2005-06	Phase:	Planning	Project Manager:	Hira Raina
Planned Completion Year:	Ongoing	% Complete:	n/a	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.4B.1	Fund:	455 Utilities
Sub-Element:	3.4 Surface Runoff	Neighborhood:	City Wide	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

The storm water system infrastructure, consisting of about 327 miles of storm drains, is, on average, 50 years old. This project video-inspects and assesses crucial elements of the storm water system in order to evaluate conditions and determine replacement needs, at an average of 8 miles/year. Though this need has been identified due to a leaking joint, the extent of the problem may not be urgent. Therefore, this work is budgeted to begin in FY 2015/2016.

### Service Level

The project will preserve the City's investment in its infrastructure and prevent future flooding problems.

### Issues

none

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Project Information Sheet

### Project: 825380 Storm Pump Station #1 Expansion

Category:	Infrastructure	Type:	Storm Drain	Department:	Public Works
Origination Year:	2005-06	Phase:	Planning	Project Manager:	Hira Raina
Planned Completion Year:	2006-07	% Complete:	n/a	Project Coordinator:	Jim Craig
Origin:	Staff			Interdependencies:	none
Element:	3 Environmental Management	Goal:	3.3B.1	Fund:	455 Utilities
Sub-Element:	3.3 Sanitary Sewer System	Neighborhood:	City Wide	Sub-Fund:	300 Wastewater Management

### Project Description and Statement of Need

Sunnyvale operates two storm pump stations to pump accumulated storm water into the San Francisco Bay. These are required for areas that are close to sea level and could suffer flooding, particularly during large storms and exceptionally high tides. Storm Pump Station #1 is located between the Water Pollution Control Plant (WPCP) and the SMaRT® Station. The facility consists of a structure with two natural-gas powered pumps, one small electric pump, three discharge pipes and a fenced yard. Since there are several items of work proposed for this location, this is the second of two projects (project #822751 is the first project). Work in this second project consists of two phases: (1) dredging the holding area, and (2) expanding the building and adjacent site modifications.

The holding area has a small portion extending south from the building to Carl Road, and a much larger basin extending to the east and up towards the Caribbean bridge. Due to the nature of the basin (wetlandish), constant water flow through the storm system, power lines in the center, and overall environment issues, this item is projected to cost \$1.9M to build. The project budget consists of environmental permitting ( approximately \$100,000), engineering design (approximately \$150,000), and dredging (approximately \$1,000,000).

The new building would replace the existing one, which is under-designed for the 100 year flood and does not have emergency power; the project includes new pumps, discharge piping, generator, and related road work. Building improvements are not proposed until after the Santa Clara Valley Water District (SCVWD) makes improvements to the Bay levee under its jurisdiction and completes raising the main levee to the 100 year flood plain elevation.

### Service Level

The project will prevent possible breakdown of the station at a time of need, and ensure the structural safety of the building.

### Issues

This project is a continuation of the Pump Station 1 rehabilitation, but the work as described in the Statement of Need cannot be done until the SCVWD completes raising the main levee to the 100 year flood plain elevation.

### Project Financial Summary

Financial Data	Prior Actual	Budget 2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	10 Year Budget	Grand Total
<b>Project Costs</b>	0	0	0	0	0	0	0	0	0	114,869	761,579	1,015,829	1,892,277	1,892,277
<b>Revenues</b>														
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers-In</b>														
Fund Reserves		0	0	0	0	0	0	0	0	114,869	761,579	1,015,829	1,892,277	
<b>Total</b>	0	0	0	0	0	0	0	0	0	114,869	761,579	1,015,829	1,892,277	1,892,277
<b>Operating Costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0